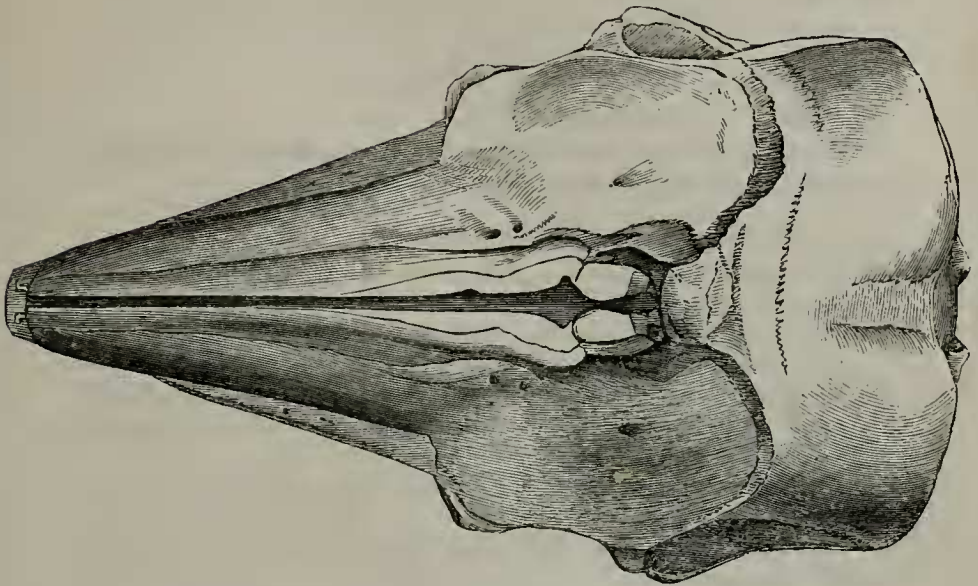


Fig. 5.



Skull of *Phocæna spinipinnis*, seen from above, reduced one-third.

Plata, and was afterwards exhibited in Buenos Ayres to the public, some years before I came to this country.

Length of the whole skull, 29 centim.

Breadth between the orbits, 17 centim.

Length of the external margin of the upper jaw, 12 centim. ; of the lower jaw, 22 centim.

Note.—The tympanic bone is lost ; the figure is therefore defective in this part.

2. LIST OF THE LAND AND FRESHWATER SHELLS OF THE ZAMBESI AND LAKE NYASSA, EASTERN TROPICAL AFRICA, COLLECTED BY JOHN KIRK, M.D., F.L.S., &C. BY DR. H. DOHRN.

[The following list of land and freshwater shells, collected by me on the Zambesi and Lake Nyassa, has been drawn up by Dr. H. Dohrn, who has kindly undertaken their examination and description.

The *Unionidæ* of the lake having previously been described and figured by Isaac Lea, in a paper read before the Academy of Natural Sciences of Philadelphia, April 12th, 1864, are not here included. They numbered six species, and one still remains undescribed.

Of the twenty-four species noticed in this list by Dr. Dohrn, seven prove new to science, thirteen have been known before, and four belong to difficult families. To each species I have added the localities where found.

I take this opportunity to correct an error in the "List of Mammalia met with in Zambesia," where no. 24 should be *Lycan venaticus* instead of *Otocyon lalandii*, as there given.—J. K.]

1. HELICEA.

1. HELIX MOSAMBICENSIS, Pfr.

From Mozambique, Zambesi, near Tete, and Lake Nyassa, under the bark of trees and among rocks.

2. STREPTAXIS KIRKII, Dohrn, n. sp.

Testa perforata, depresso-piriformis, tenuis, subtiliter oblique striata, epidermide cereo-albida induta; spira obtuse conoidea, lateralis; sutura impressa, submarginata; anfr. 6, convexiusculi, superi regulares, 2 ultimi lateraliter valde deviantes, penultimus latere aperturali deplanatus; apertura subverticalis, lunaris, edentula; peristomium simplex, mediocriter expansum, margine columellari reflexo.

Diam. maj. $\frac{5}{16}$, min. $\frac{3}{16}$, alt. $\frac{3}{16}$, apert. diam. $\frac{1}{8}$ poll.

From a small rocky island in Lake Nyassa, named "Mumba," in lat. 14° south. Only dead shells were found, imbedded under decaying vegetable matter.

3. ENNEA LÆVIGATA, Dohrn, n. sp.

Testa sinuate rimata, cylindrica, solidula, lævigata, sub epidermide cereo-albida; apex obtusus; sutura impressa, simplex; anf. 8-9, vix convexi, ultimus antice subascendens, basi angulatus et bisrobiculatus; apertura vix obliqua, oblongo-rotundata, plicis 5 coarctata, 1 lamelliformi subverticali in angulo insertionis, 1 profunda transversa ad columellam, 1 parva dentiformi in margine sinistro, 2 valde appropinquatis in margine dextro, supera majore, tuberculata, infera minore; peristomium undique reflexum expansiusculum.

Long. $\frac{5}{16}$, lat. $\frac{1}{8}$, apert. diam. $\frac{3}{32}$ poll.

Hab. Cum præcedente.

4. ACHATINA LAMARCKIANA, Pfr.

5. ACHATINA PANTHERA, Fér.

Both from Mozambique and Zambesi.

6. BULIMINUS STICTUS, Martens.

7. BULIMINUS CATENATUS, Martens.

Both species found under the bark of trees during the dry season, along with *Helix mosambicensis*.

8. BULIMINUS KIRKII, Dohrn, n. sp.

Testa rimato-perforata, oblongo-conica, tenuis, dense et subtiliter striata, subdiaphana, griseo-cornea; spira turrato-conica, apice obtusulo; anf. 7, modice convexi, ultimus spira brevior, basi rotundatus, circa umbilicum subcristatus; columella verticalis; aper-

tura vix obliqua, ovalis; peristomium simplex, vix expansum, margine collumellari late dilatato.

Long. $\frac{1}{16}$, diam. $\frac{7}{16}$; apert. $\frac{7}{16}$ longa, $\frac{5}{16}$ poll. lata.

Found in Mozambique, on the mainland, near Cabaçeira.

2. CYCLOSTOMACEA.

9. CYCLOSTOMUS CALCAREUS, Sowerb.

Near Tete, and on the Nyassa Lake, commonly in rocky places.

3. LIMNÆACEA.

10. PHYSOPSIS AFRICANA, Krauss.

11. LIMNÆA NATALENSIS, Krauss.

Both from Lake Nyassa.

Besides these, there are in the collection two species of *Planorbis*, one *Limnæa*, and one *Physa* which I could not name, but which I would not undertake to describe as new, not being sufficiently supplied with literature on this very difficult family.

4. AMPULLARIACEA.

12. LANISTES PURPUREUS, Jonas.

Mozambique, in a lagoon near Cabaçeira Grande.

13. LANISTES OVUM, Peters.

The Zambesi and Lake Nyassa (unusually large specimens).

14. LANISTES NYASSANUS, Dohrn, sp. nov.

Testa imperforata, globosa, crassa, olivacea, nitida, striis incrementi sculpta; spira valde depressa, interdum plana; anfractus convexiusculi, interdum ad suturam obtusi angulati, ultimus magnus, ventrosus, supra deplanatus, angulatus, tum convexus, basi attenuatus; columella arcuata, callosa; apertura obovata, intus carnea, nitidissima; operculum castaneum, corneum.

Diam. maj. 3, min. $2\frac{3}{4}$; apert. diam. maj. 2, min. $1\frac{1}{2}$ poll.

This large shell was found in considerable numbers near the south end of Nyassa, and among the roots of Papyrus near the small Lake Pamolombue, through which the Shiré flows after leaving the great lake. It was not found on the Zambesi or in any other locality.

5. PALUDINACEA.

15. PALUDINA BULIMOIDES, Oliv.

River Rovuma.

16. PALUDINA POLITA, Frauenfeld.

Lake Nyassa.

I feel inclined to suspect that the *Paludina bulimoides* has been mixed up with the shells from the lake, being the only North-African form which I found among them. Should it nevertheless

really occur there, it would turn out to be the only freshwater shell occurring in the Nile and the South-African rivers, with the exception of the following :—

17. *MELANIA TUBEBCULATA*, Mueller,

Which is an inhabitant of Syria, India, Ceylon, &c. &c., as well as of Lake Nyassa.

18. *MELANIA NODICINCTA*, Dohrn, n. sp.

Testa turrata, solida, olivacea, longitudinaliter et transverse costata, costis transversis arcuatis, nodiferis, anfractuum superiorum nodis tri- vel quadri-seriatis, in anfractu ultimo nodulorum serie una accedente, basi liris angustis 8-10 circumscripta; sutura distincte impressa; anfractus subplani, lente accrescentes; apertura piriformis, labri parte basali modice producta.

Long. $1\frac{3}{8}$, diam. anfr. ult. $\frac{7}{16}$; apert. long. $\frac{7}{16}$, lat. $\frac{1}{4}$ poll.

Among rushes and papyrus near the south end of Lake Nyassa, and in the upper part of the River Shiré, where it flows from it.

19. *MELANIA VICTORIÆ*, Dohrn, sp. nov.

Testa turrato-pyramidata, solida, pallide olivacea, punctis castaneis adspersa, sublævigata; sutura distinctissima, duplicata; anfractus plani, ultimus medio angulatus, basi 6-8 sulcis circumdatus; apertura intus cærulescens, piriformis; labrum basi valde productum.

Long. $\frac{7}{8}$, diam. anfr. ult. $\frac{5}{16}$; apert. long. $\frac{1}{4}$, lat. $\frac{3}{16}$, poll.

From the rapids above the Victoria Falls of the Zambesi, where it occurred in numbers with a *Paludina* and *Unio*, both of which were lost.

6. VENERIDÆ.

20. *CYRENA ASTARTINA*, Martens.

Lake Nyassa, the Shiré, and Zambesi.

I regret very much that there are no *Unionidæ* in the collection which I got for examination. All I can state from the above list is, that the conchological fauna of Lake Nyassa seems to belong to the same region with Natal; but most of the freshwater species from the lake having turned out to be hitherto unknown, and some of the other species having been found by Capt. Speke and others far more northwards, it is rather difficult to come to any conclusion from the present collection.